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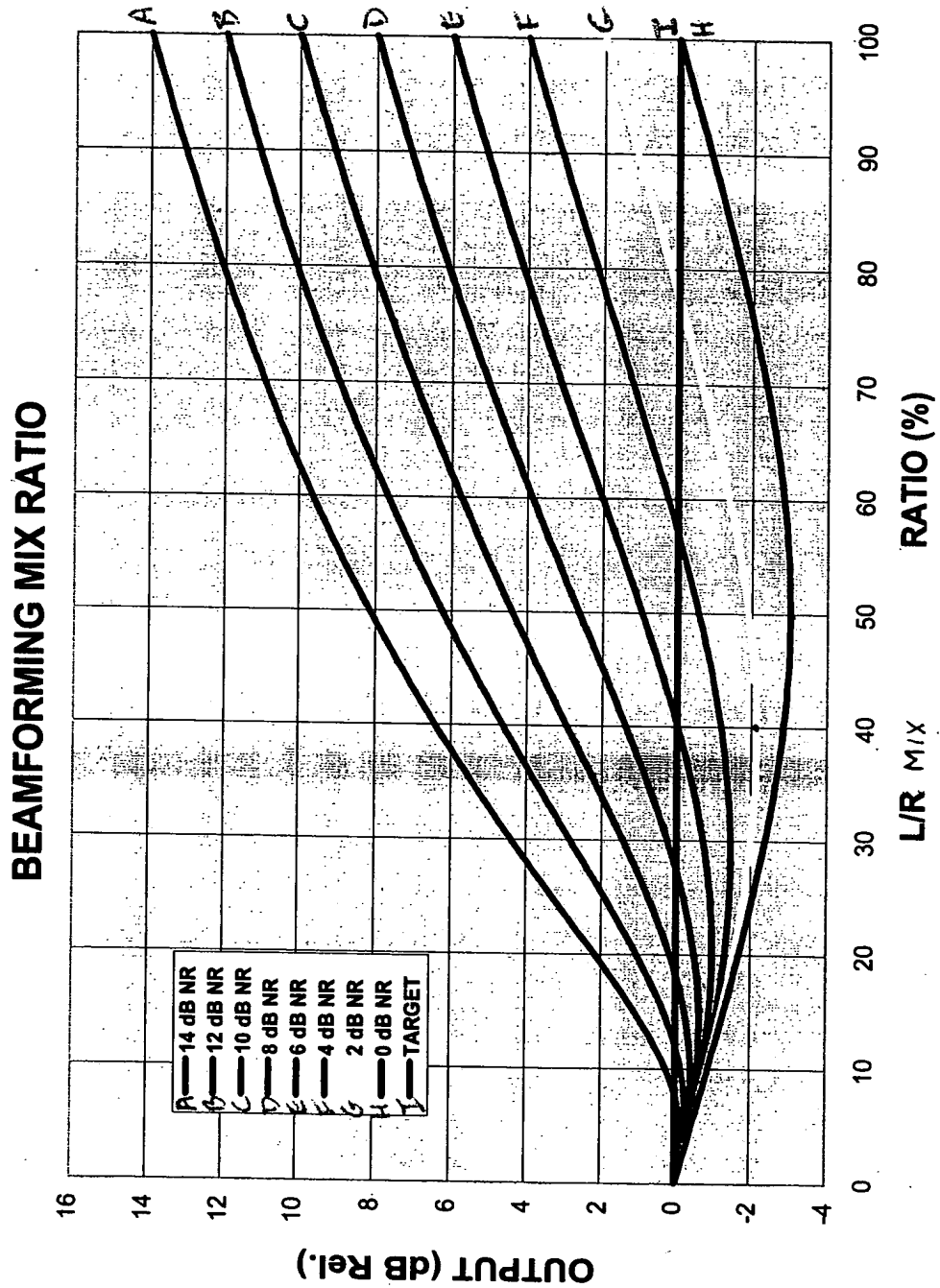


Fig 1

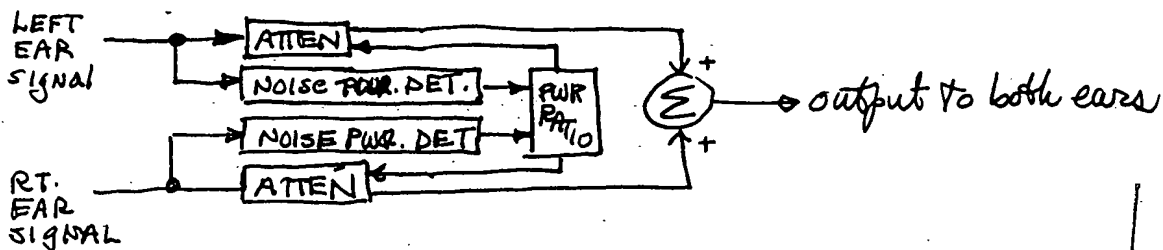
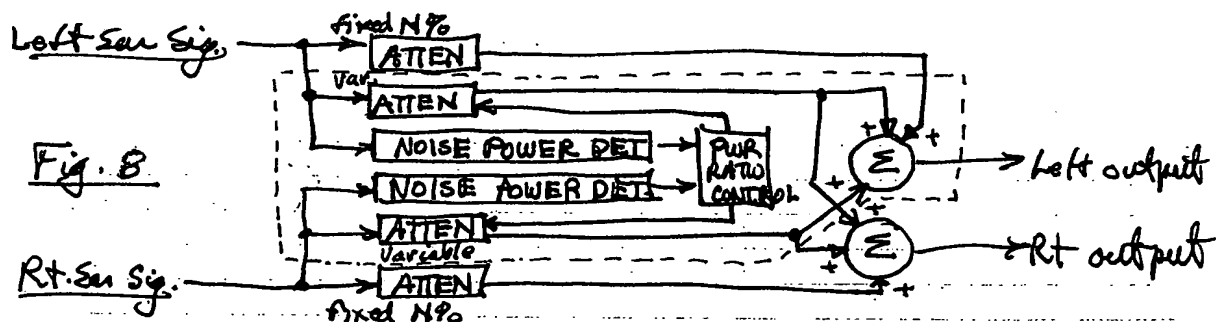
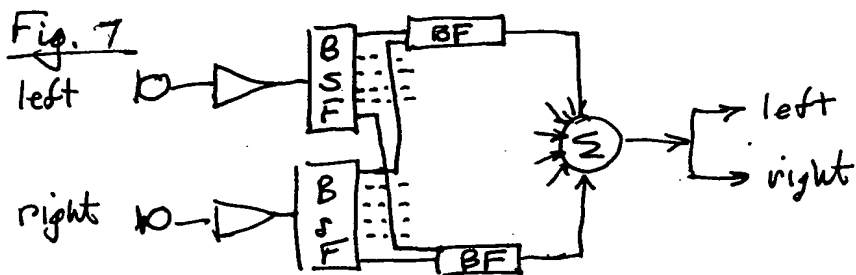


FIG 2.



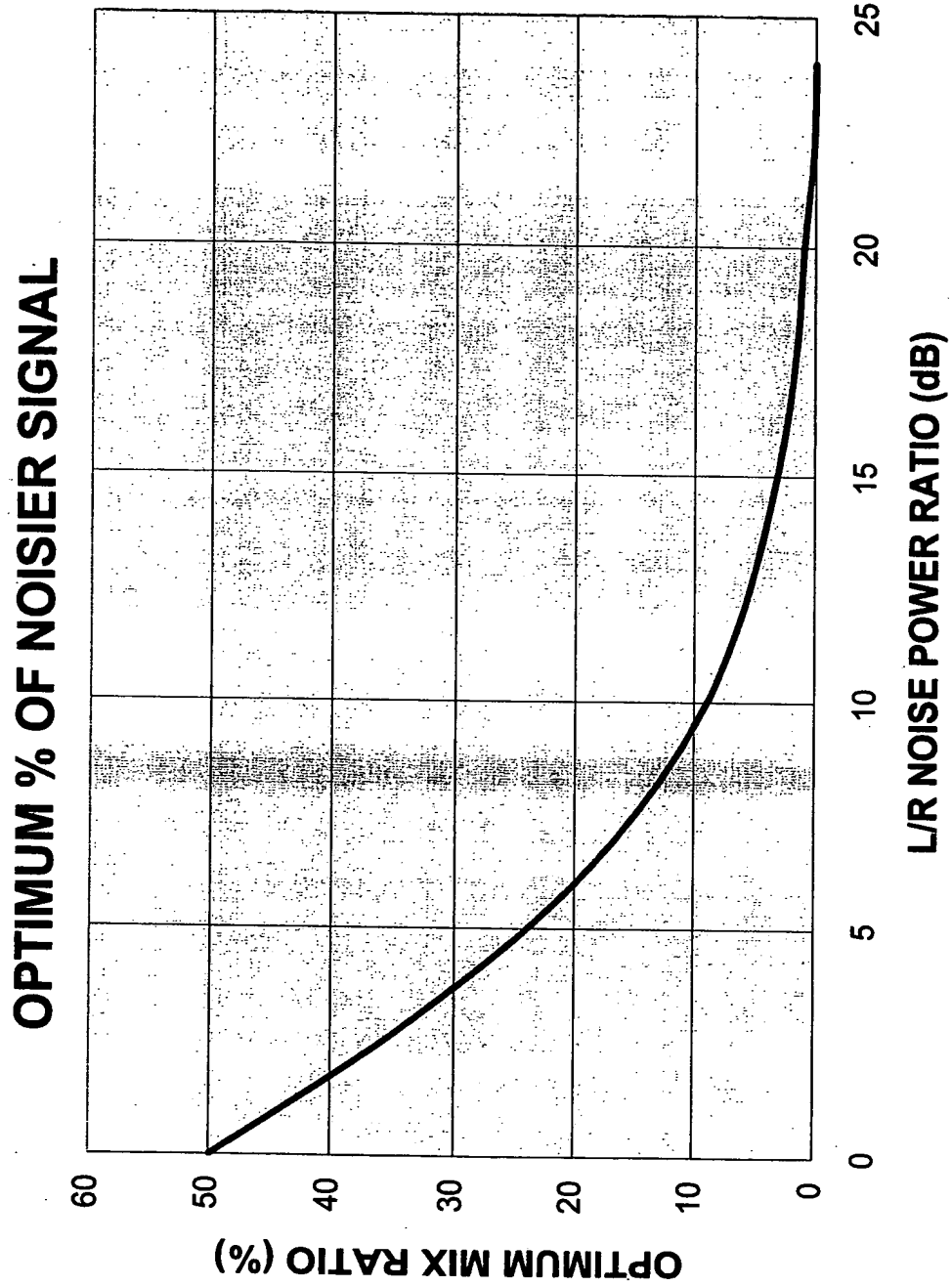


Fig 3

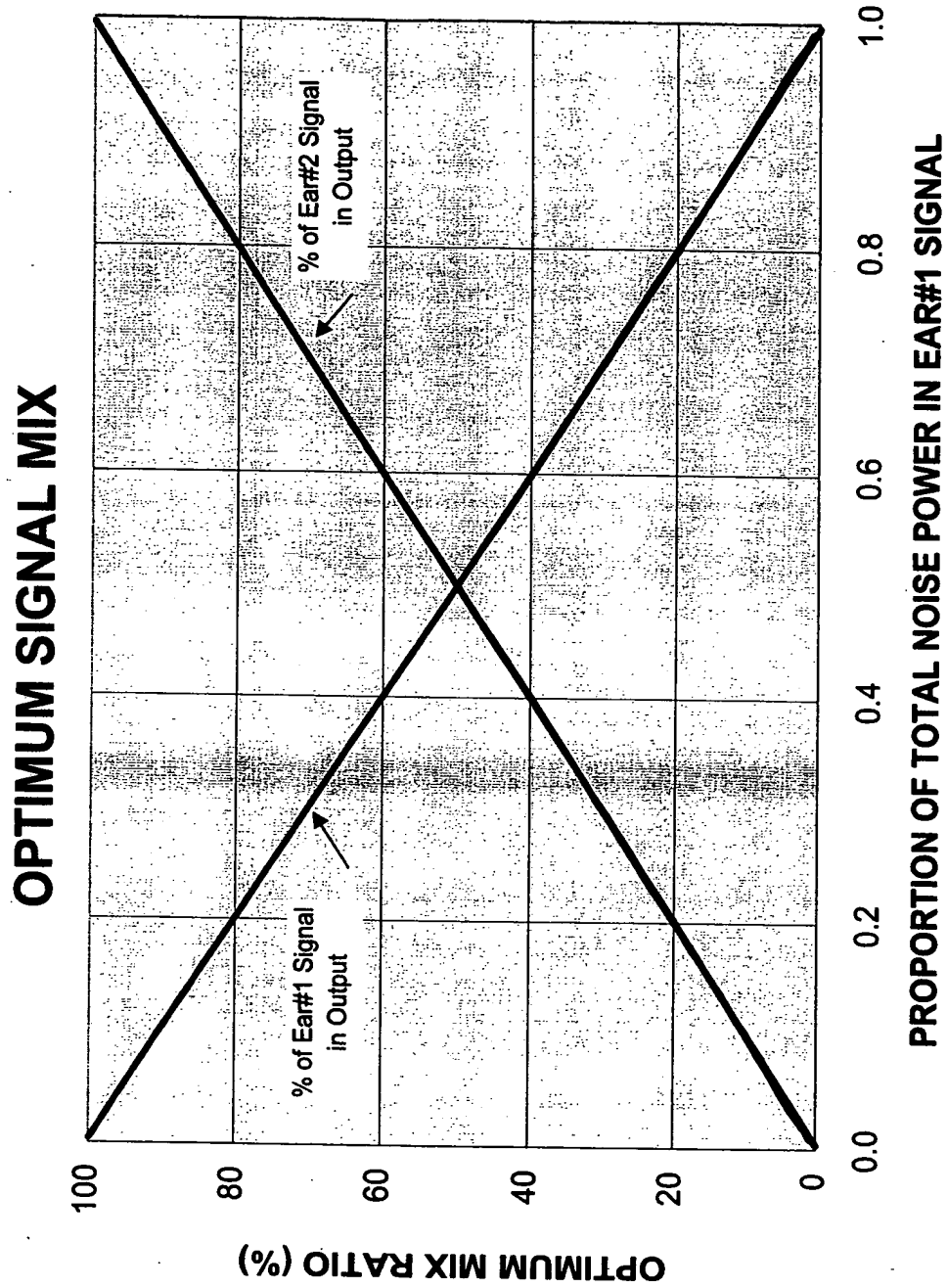


FIG-4

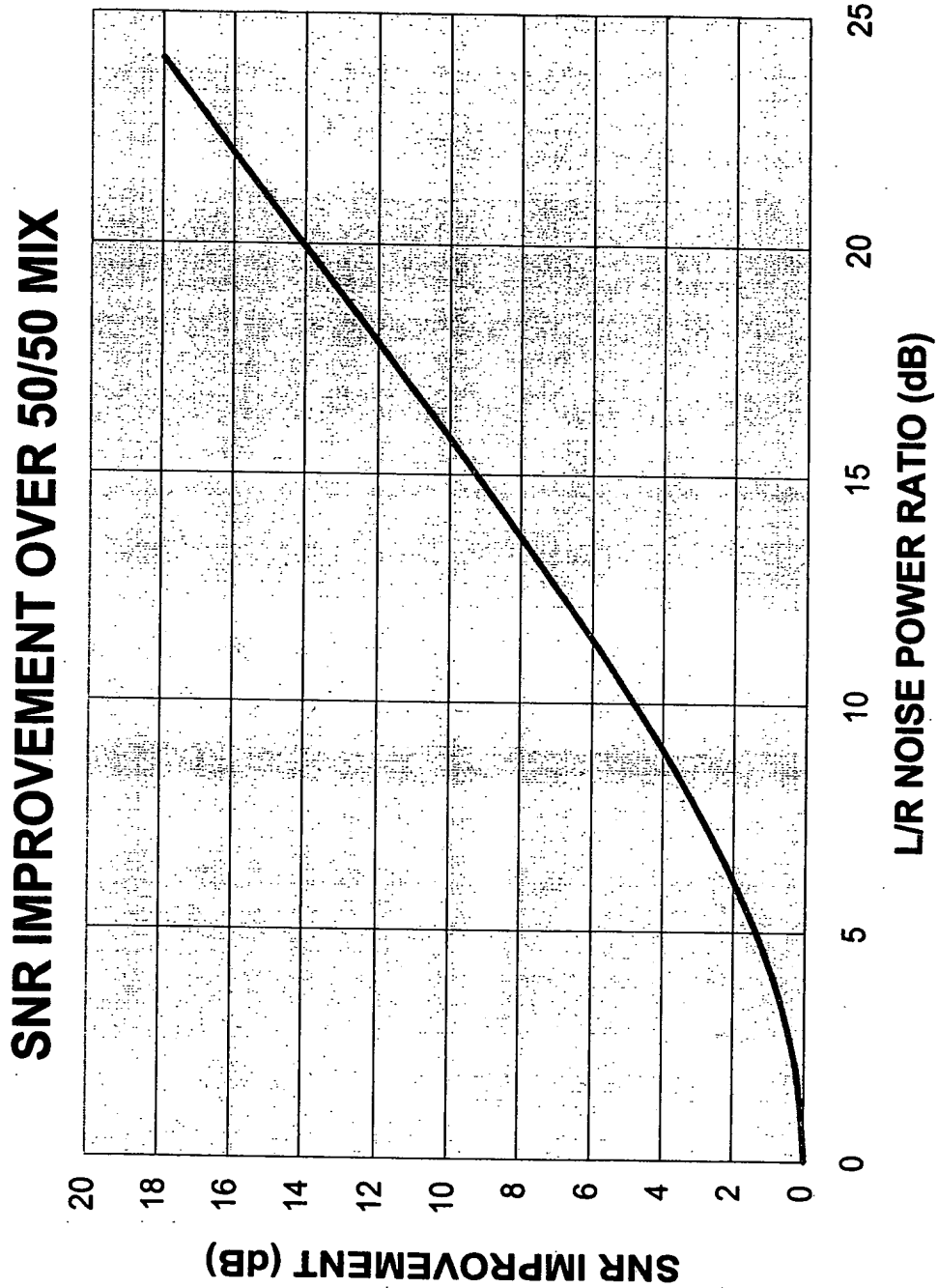


FIG 5

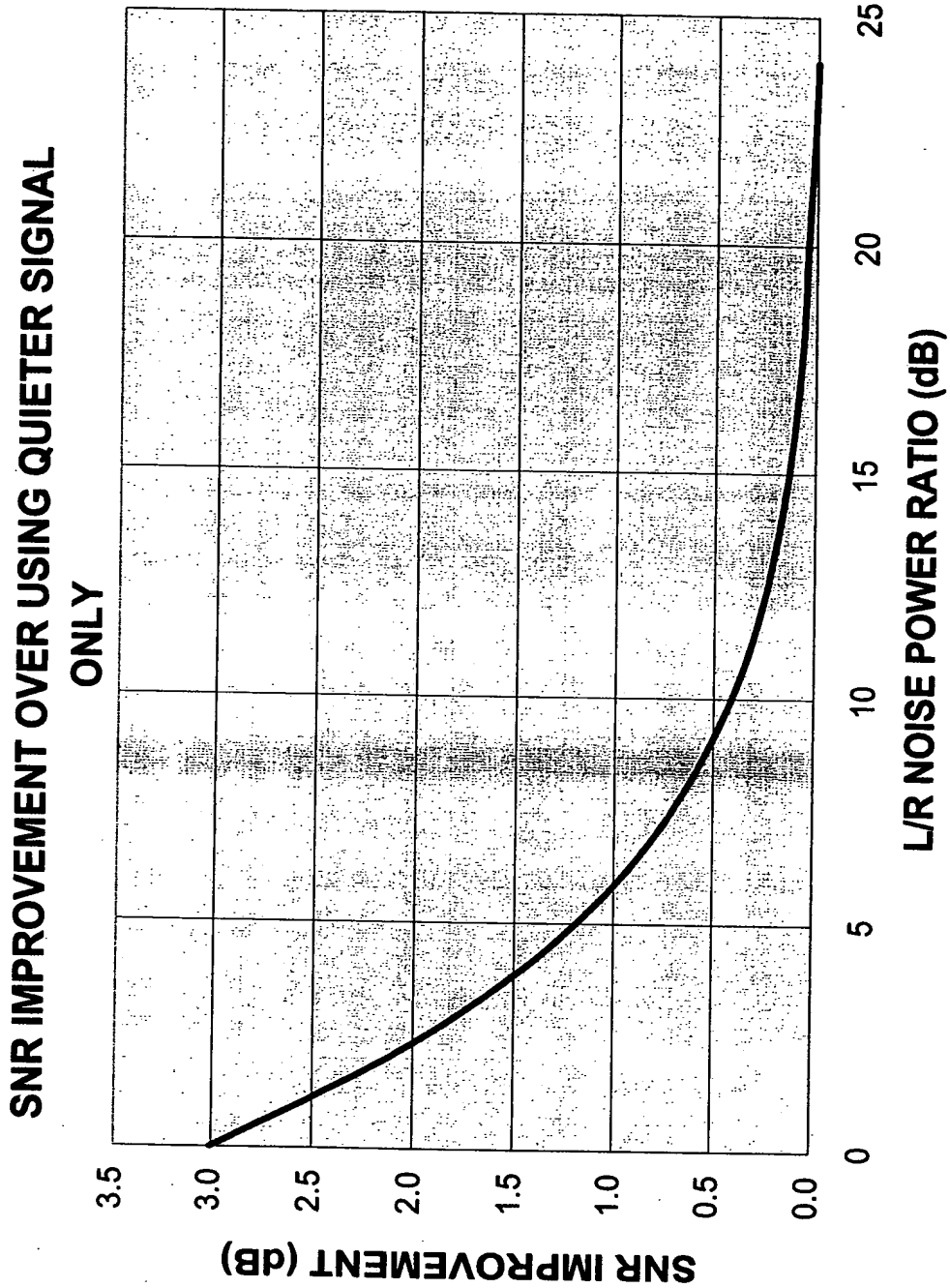


FIG. 6

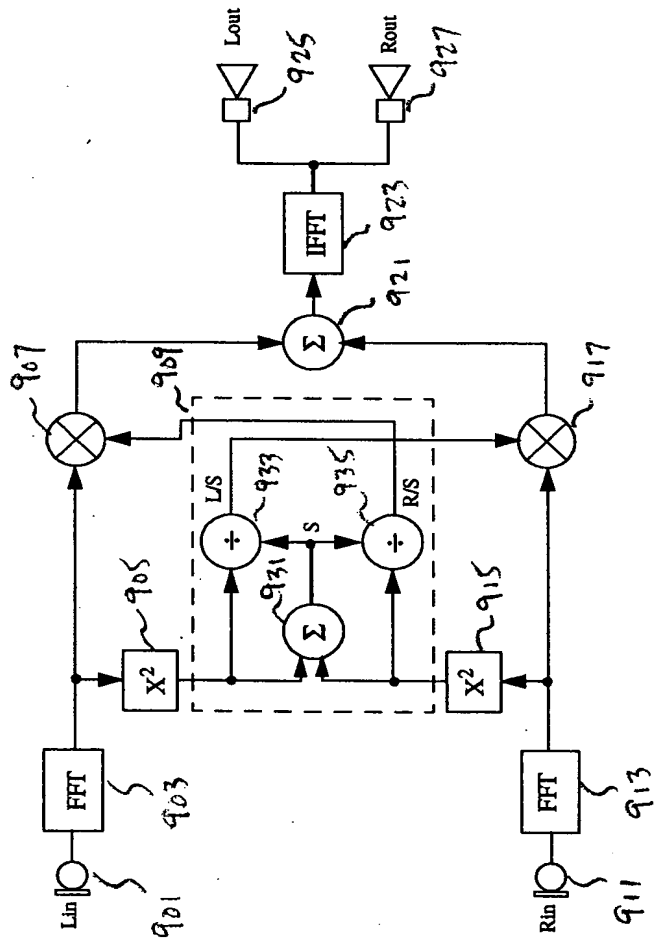


Fig 9

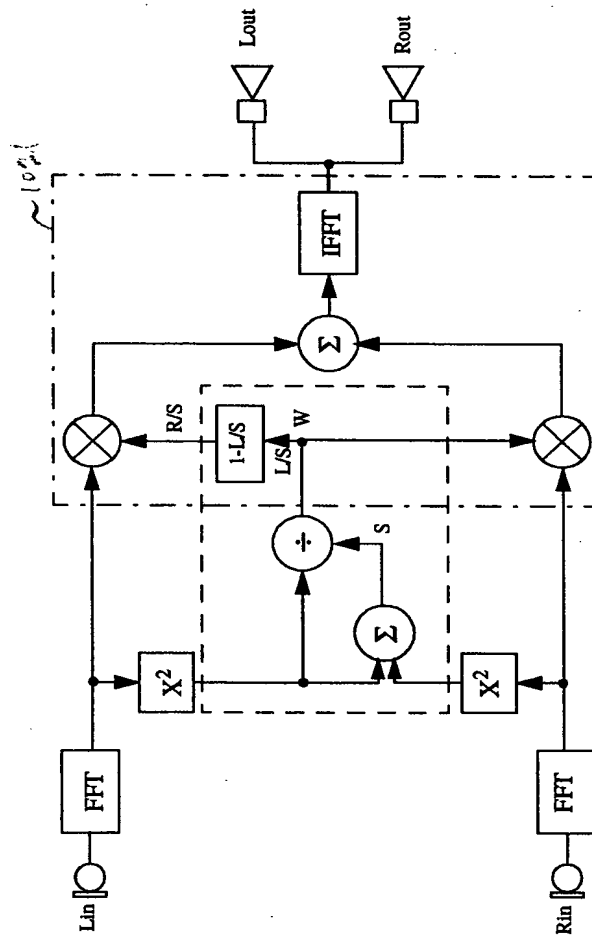


Fig 10

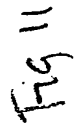


Fig 11

BZ5 - Beam Forming Mode

DIRECTIONALITY	
—	500Hz, DI = 6.6
—	1000Hz, DI = 11.1
—	2000Hz, DI = 8.5
—	4000Hz, DI = 10.5

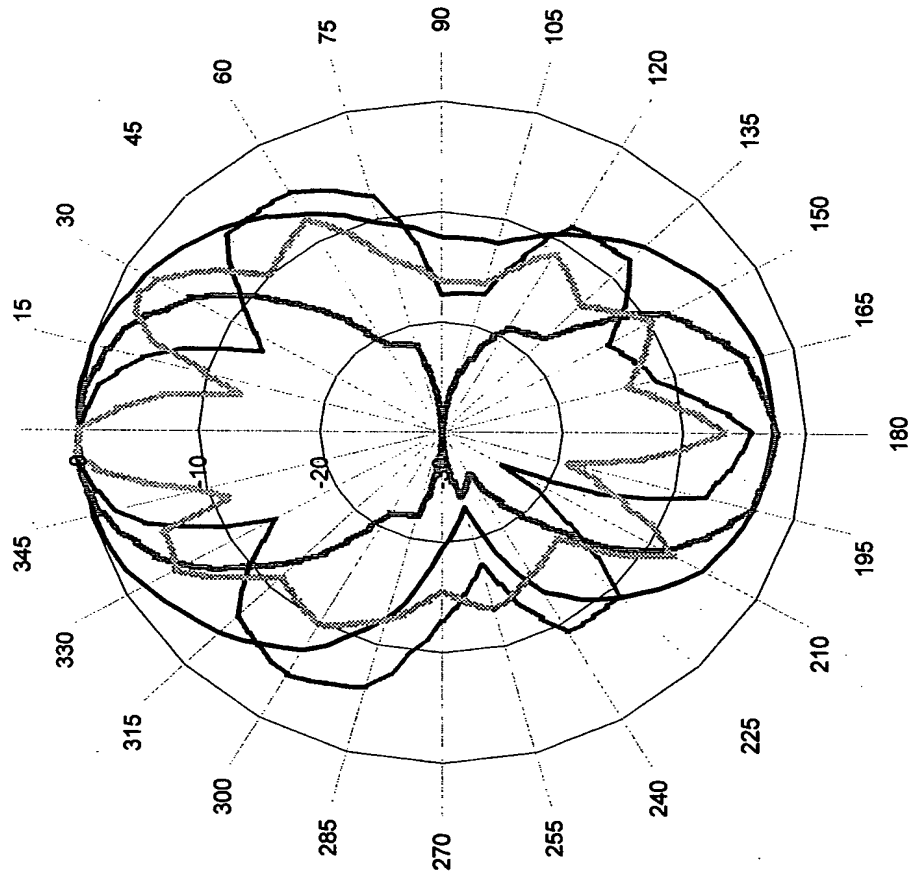


Fig 12

BZ-5 In-Situ Right Ear Polar Response

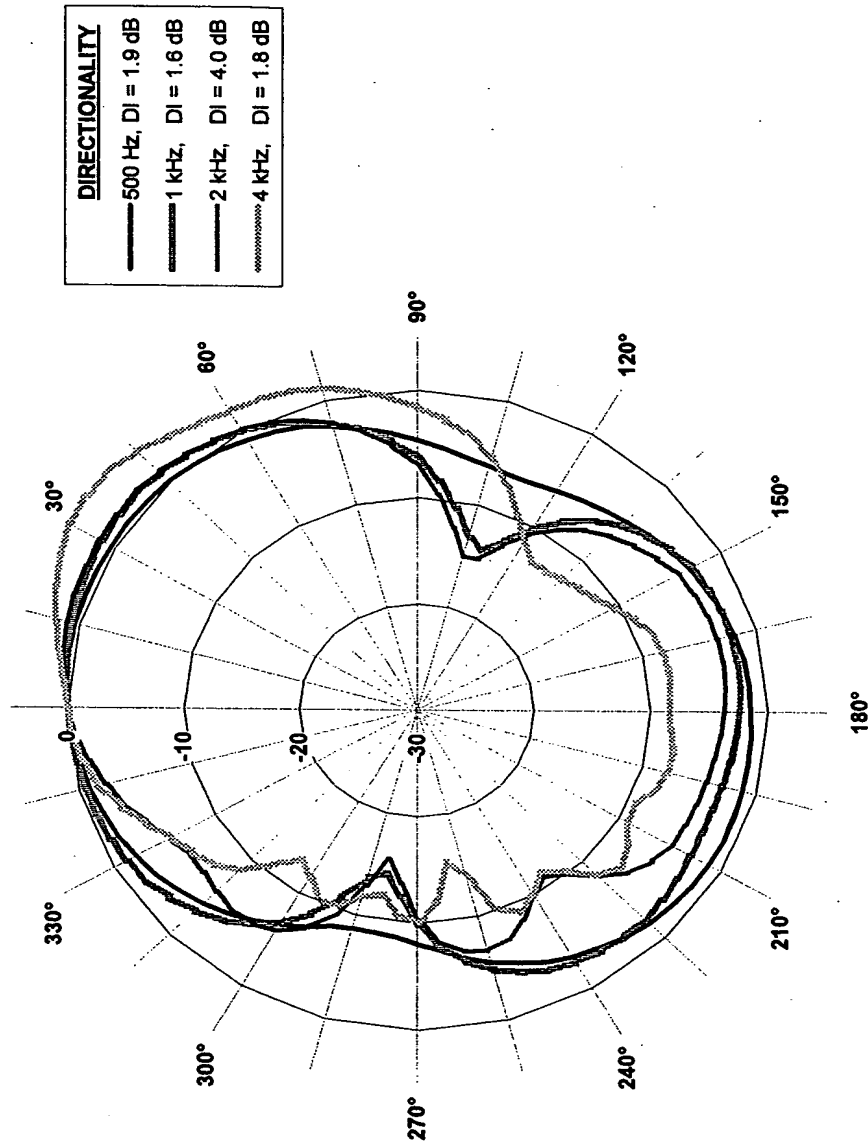


Fig 13

Second Order - Beam Forming Mode

DIRECTIONALITY	
—	500Hz, DI = 8.9
—	1000Hz, DI = 9.3
—	2000Hz, DI = 11.5
—	4000Hz, DI = 11.5

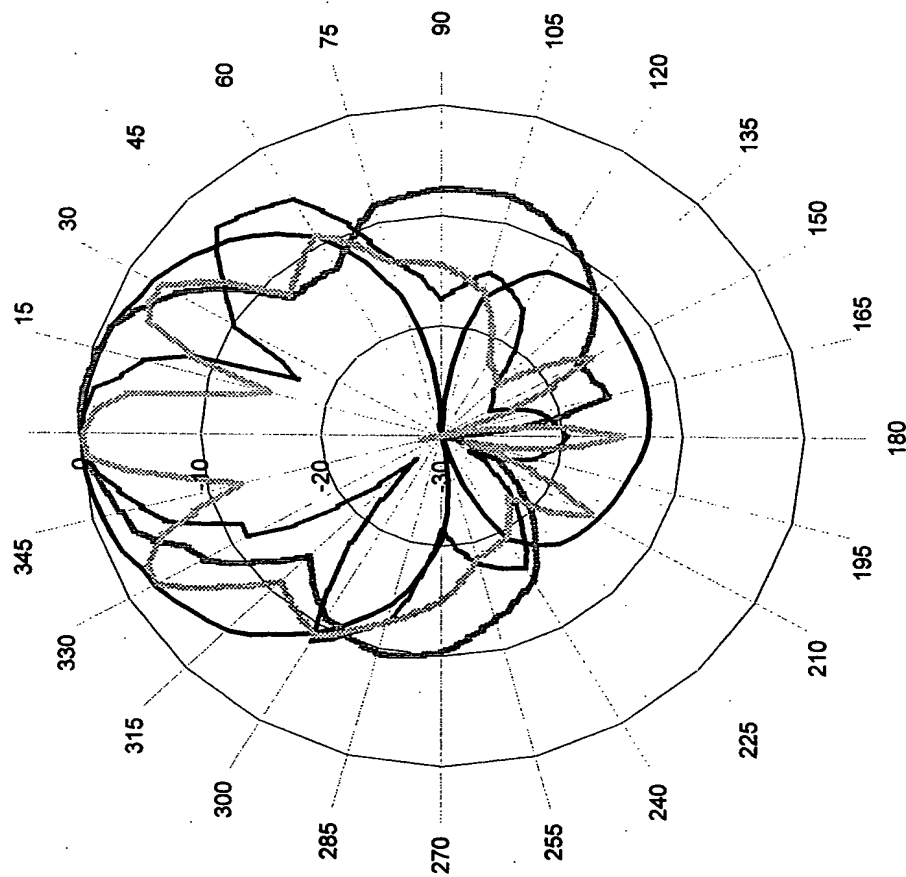


Fig 14

SHAW DATA - Azimuthal Interaural Difference

Azimuth Angle (Deg.)	IAD @ 500 Hz (dB)	IAD @ 1 kHz (dB)	IAD @ 2 kHz (dB)	IAD @ 4 kHz (dB)
0	0	0	0	0
10	1.4	2.3	1.8	3
20	2.7	4.5	3.5	6.4
30	4	6.8	5.2	9.2
40	5.3	8.5	6.8	12
50	5.9	9.5	8.35	14.1
60	6	9.2	9.8	15.2
70	5.8	8.2	10.3	15
80	5.75	7.4	9.5	14
90	5.6	7	8.6	12.8
100	5.7	7.4	9.5	12.05
110	5.85	8.5	10.3	11.4
120	6	9.3	9.8	9.8
130	5.9	9.8	8.35	7.7
140	5.5	9	6.8	6
150	4.5	7.35	5.2	4.2
160	3.1	4.9	3.5	2.7
170	1.7	2.5	1.8	1.3
180	0	0	0	0

Fig 15

BEAMFORMER - Azimuthal Dependence of Electrical Phase Difference

Azimuth Angle (Deg.)	BF Phase @ 500 Hz (Deg.)	BF Phase @ 1 kHz (Deg.)	BF Phase @ 2 kHz (Deg.)	BF Phase @ 4 kHz (Deg.)
0	0	0	0	0
5				
10				
15				180
20				
25				
30			180	360
35				
40				
45				540
50				
55				
60		180	360	720
65				
70				
75				
80				
85				
90	<180			

Fig 17

INTERAURAL DIFFERENCE

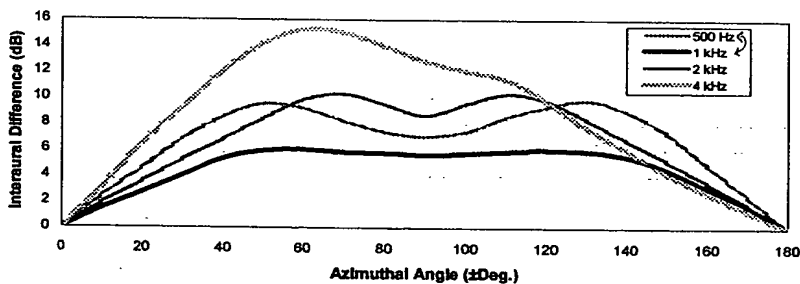


Fig 16

Using the 1-kHz Pattern As the Desired Reference Polar Pattern

FREQ.	ACTION	IAD SLOPE (dB/ADeg)	PHASE SLOPE (EDeg/ADeg)	PHASE RATE (EDeg/ADeg)	CORRECTION (EDeg/dB)
At 500 Hz	Double the phase rate	16 dB / 70 deg. = 0.22857	90 / 60 = 1.5	6.563	6.563
At 1 kHz	Do Nothing	16 dB / 120 deg. = 0.13333	180 / 60 = 3	22.500	0
At 2 kHz	Half the phase rate	10 dB / 60 deg. = 0.16667	180 / 30 = 6	36.000	-18
At 4 kHz	Quarter the phase rate	12 dB / 40 deg. = 0.30000	180 / 15 = 12	40.000	-30

Fig 18

CONTROL SURFACE - Electr. Deg.

IAD (dB)	FREQ (kHz)							
	0.5	1	2	4	8	16	32	64
0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	6.56	3.28	0.00	-9.00	-18.00	-24.00	-30.00	-36.00
2	13.13	6.56	0.00	-18.00	-36.00	-48.00	-60.00	-72.00
3	19.69	9.84	0.00	-27.00	-54.00	-72.00	-90.00	-108.00
4	26.25	13.13	0.00	-36.00	-72.00	-96.00	-120.00	-144.00
5	32.82	16.41	0.00	-45.00	-90.00	-120.00	-150.00	-180.00
6	39.38	19.69	0.00	-54.00	-108.00	-144.00	-180.00	-216.00
7	45.94	22.97	0.00	-63.00	-126.00	-168.00	-210.00	-252.00
8	52.50	26.25	0.00	-72.00	-144.00	-192.00	-240.00	-288.00
9	59.07	29.53	0.00	-81.00	-162.00	-216.00	-270.00	-324.00
10	65.63	32.82	0.00	-90.00	-180.00	-240.00	-300.00	-360.00
11	72.19	36.10	0.00	-99.00	-198.00	-264.00	-330.00	-396.00
12	78.76	39.38	0.00	-108.00	-216.00	-288.00	-360.00	-432.00
13	85.32	42.66	0.00	-117.00	-234.00	-312.00	-390.00	-468.00
14	91.88	45.94	0.00	-126.00	-252.00	-336.00	-420.00	-504.00
15	98.45	49.22	0.00	-135.00	-270.00	-360.00	-450.00	-540.00
16	105.01	52.50	0.00	-144.00	-288.00	-384.00	-480.00	-576.00
17	111.57	55.79	0.00	-153.00	-306.00	-408.00	-510.00	-606.00
18	118.13	59.07	0.00	-162.00	-324.00	-432.00	-540.00	-648.00
19	124.70	62.35	0.00	-171.00	-342.00	-456.00	-570.00	-690.00
20	131.26	65.63	0.00	-180.00	-360.00	-480.00	-600.00	-720.00

Fig 19

REQUIRED ELECTRICAL PHASE SHIFT
(As a Function of Frequency and Interaural Difference)

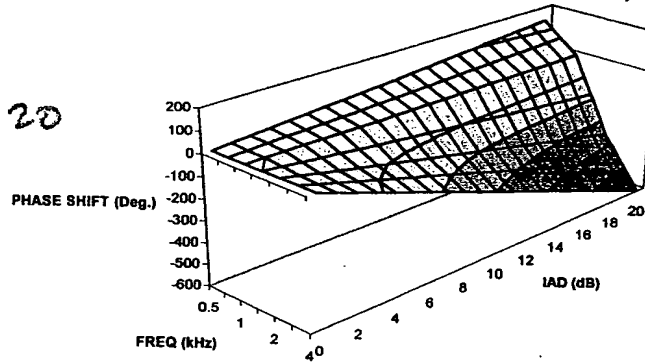


Fig 20

CORRECTION SLOPE

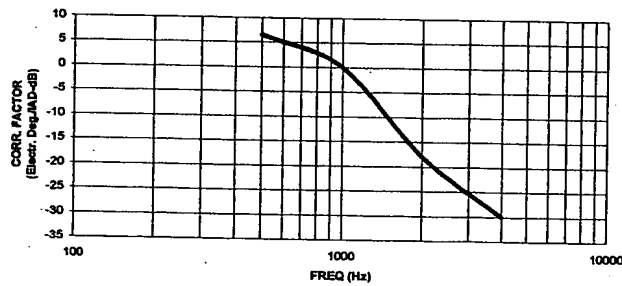


Fig 21

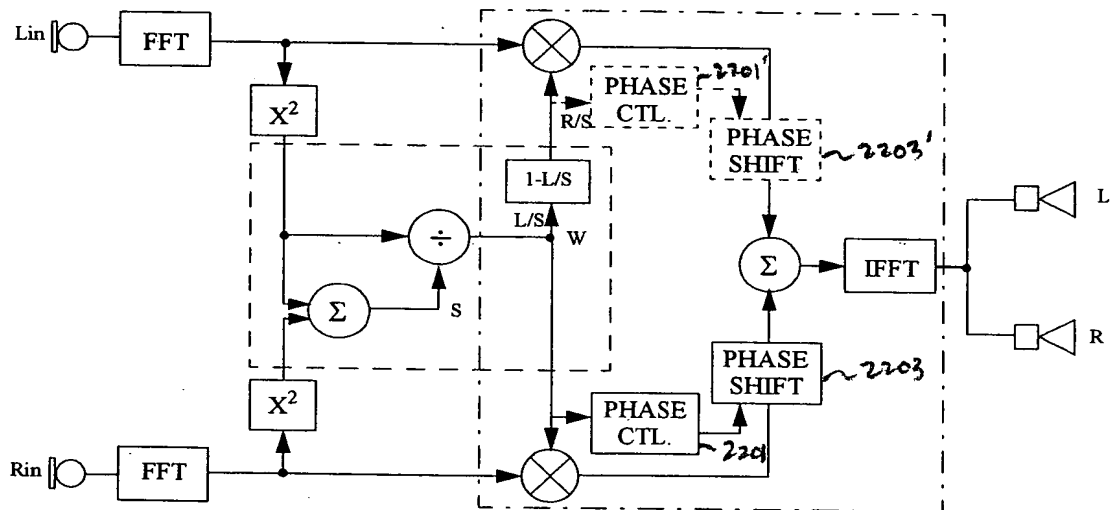


Fig 22

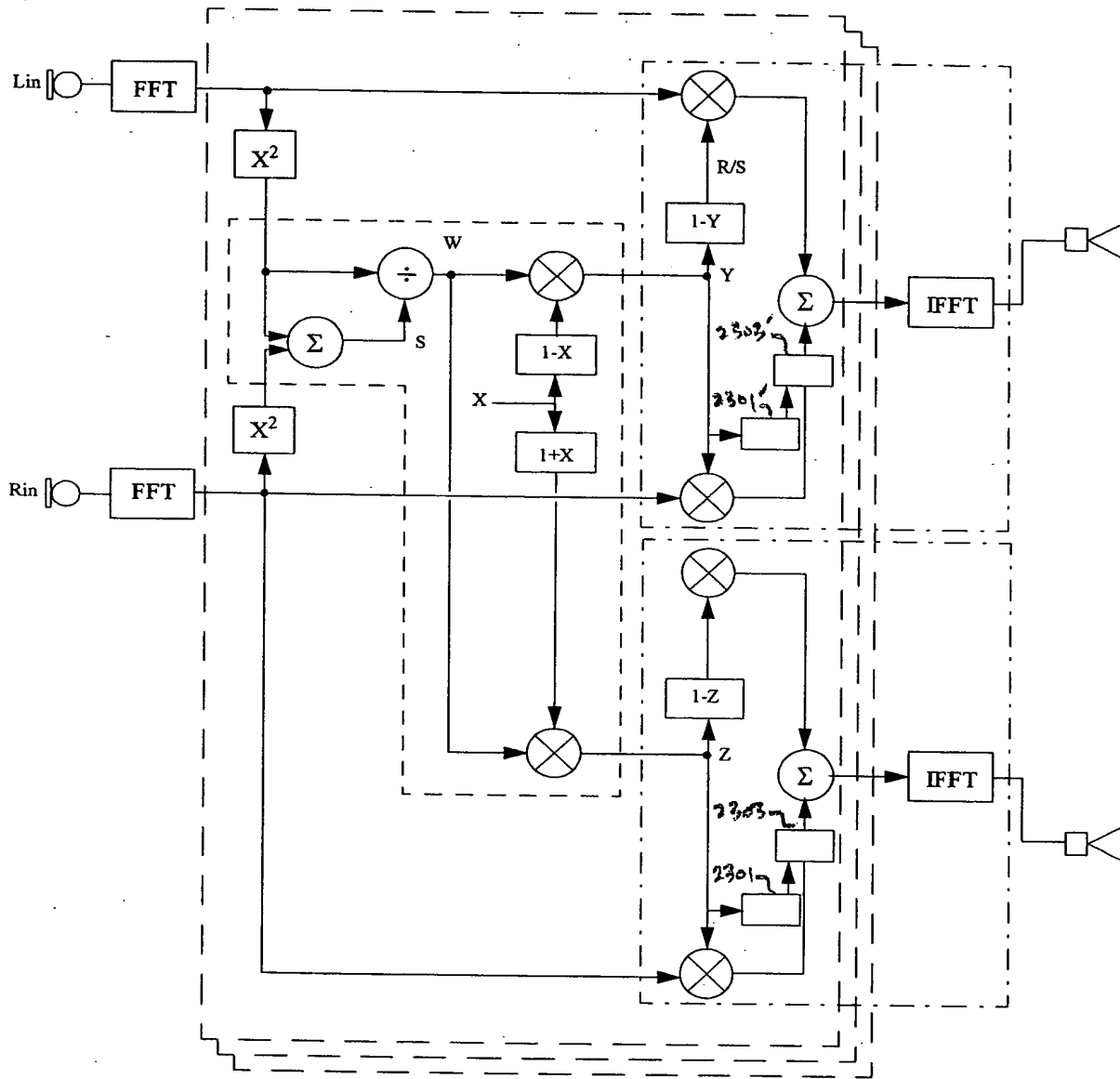


Fig 23

BZ5/Phase Corrected - Beam Forming Mode (Calculated)

<u>DIRECTIONALITY</u>	
—	500Hz, DI = 9.4
---	1000Hz, DI = 11.1
—	2000Hz, DI = 9.7
---	4000Hz, DI = 12.4

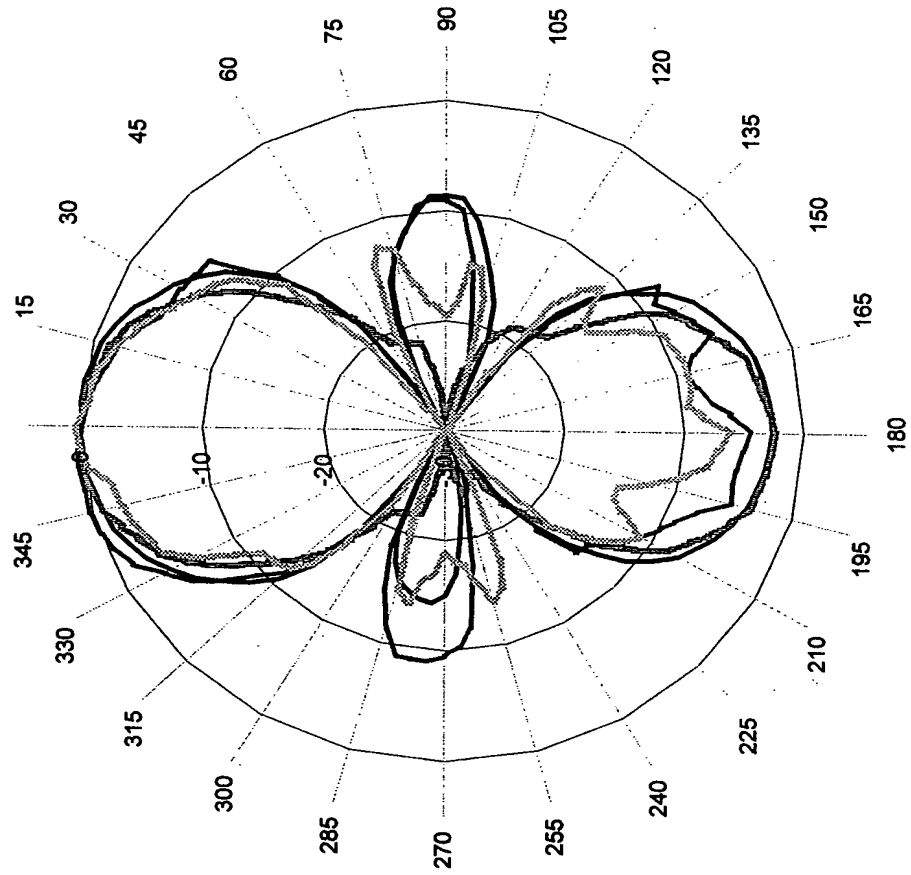


Fig 24